RANSOM
Consulting, Inc.

Consulting
Engineers
and Scientists

January 7, 2015

Project 101.05023.001

Ms. Maria Stowell, P.E.
Manager of Engineering
Pease Development Authority
55 International Drive
Portsmouth, New Hampshire 03801

RE: December 2014 Stormwater Sampling Results
Pease International Tradeport
Portsmouth, New Hampshire
Permit No. NH0090000

Dear Maria:

Ransom Consulting, Inc. (Ransom) completed stormwater sampling at the Pease International Tradeport on the morning of Tuesday, December 9, 2014. Light snow transitioned to a rain/snow mix and then all rain around 3:00 a.m. According to the website monitoring data, the precipitation total in the storm event exceeded 0.1 inch around 10:00 a.m. so Ransom mobilized to the Site to collect the stormwater samples at that time. The previous precipitation event began on December 5, 2014 and ended on December 7 around 12:14 a.m. A decision was made to sample despite a storm separation of less than 72 hours (i.e., approximately 50-60 hours) rather than risk missing a monthly sampling event. The weather forecast for December predicted a rainy stretch through at least December 17, and winter weather was expected to follow; in Ransom's opinion, the sampled storm event was considered to be representative for this time of year.

Sampling personnel observed foam with a yellow/orange tint on the water at the Flagstone Creek outfall upon arrival at this sampling event. The volume of the foam decreased while present at this location. Ransom informed the Pease Development Authority (PDA) of this field observation via email on December 9, 2014. The quarterly visual analysis was completed in October 2014 so a visual analysis assessment form was not completed during this monitoring event.

Deicing of planes and/or runways occurred at the airport in the month prior to the sampling event. Therefore, as required by the Permit, the sampling event included collection of samples for analysis of deicing chemicals (i.e., propylene glycol) from Flagstone Creek and McIntyre Brook in addition to the routine monitoring parameters. The frequency of analysis for propylene glycol is listed as "monthly when discharging" (MM/WD).

The following documents are attached:

1. Record of Storm Events for December 2014 (Attachment A);

2. Completed Discharge Monitoring Reports (DMRs) requiring signature and submittal (see below) (Attachment B);

3. Field Forms: Stormwater Sampling Field Log dated December 9, 2014, with pH measurements, collection and analysis times, and flow measurements, a Flow Calculation sheet, and Summary of Deicing (Attachment C); and

4. Laboratory chemical analysis report from Alpha Analytical, Inc. of Westborough, Massachusetts (L1429561) and Eastern Analytical , Inc. (138919) (Attachment D).

Summary of Stormwater Results

With the exception of pH at Flagstone Creek (discussed below), routine monthly parameters were within the permit limits. Propylene glycol was detected in the stormwater sample collected from McIntyre Brook at a concentration of 23 milligrams per liter (mg/l), but was not detected in the sample collected from Flagstone Creek. Trichloroethylene (sampled in November but reported on the December DMRs) was not detected in any of the four stormwater samples.

The pH meter was calibrated immediately prior to the sampling event and the calibration was confirmed against the 9.18 S.U. pH Standard. The pH measurements recorded at the first stormwater outfall, Flagstone Creek, were 6.43 and 6.42 specific units (S.U.) for the initial and duplicate samples, respectively. In accordance with the sampling protocol, field personnel collected a second sample for measurement of pH since the initial samples were outside of the acceptable pH range (6.5-8.0 S.U.); the pH for the second sample and duplicate both measured 6.42 S.U., indicating that it appeared to be functioning properly. To confirm the meter calibration prior to sampling the remaining discharge points, the field personnel recalibrated the meter in the field; the calibration was again confirmed against the 9.18 S.U. pH Standard. The pH values of stormwater samples collected from the remaining three locations were within the acceptable pH range.

The laboratory analytical methods and reporting limits for parameters which are shown on the December DMRs as having a “0” concentration value are summarized in the following table:

Parameter	**Reporting Limit**	**Analytical Method**
Trichloroethylene	0.50 ug/l	8260C
Biological Oxygen Demand, 5 day	2.0 mg/l	5210B
Oil & Grease	4.0 mg/l	1664A
Surfactants, MBAS	0.050 mg/l	5540C
Propylene Glycol	1 mg/l	8015C mod

ug/l = micrograms per liter; mg/l = milligrams per liter

Ms. Maria Stowell, P.E., Manager of Engineering
Pease Development Authority

Submittal of Stormwater Results

Please sign and submit the DMRs to the U.S. Environmental Protection Agency (U.S. EPA) and New Hampshire Department of Environmental Services (NH DES) no later than January 15, 2015. The original signed and dated DMRs should be submitted to the following address:

U.S. Environmental Protection Agency
Water Enforcement, OES4-SMR
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Duplicate signed reports should be submitted to the following address:

Wastewater Engineering Bureau
NH DES, Water Division
29 Hazen Drive
P.O. Box 95
Concord, NH 03302-0095

Ransom appreciates the opportunity to work with the PDA. If you have any questions regarding this letter, please feel free to call Nancy or Steve.

Sincerely,

RANSOM CONSULTING, INC.

Nancy Marshall
2015.01.07 14:27:01
-05'00'

Nancy E. Marshall, P.E.
Project Manager

Steven F. Rickerich, P.G.
2015.01.07 14:09:26
-05'00'

Steven F. Rickerich, P.G.
Vice President

NEM/SFR:jar
Attachments

ATTACHMENT A

Record of Storm Events

December 2014 Stormwater Sampling Results
Pease International Tradeport
Portsmouth, New Hampshire
Permit No. NH0090000

Record of Storm Events

PDA Tradeport, Portsmouth, NH **DECEMBER 2014**

Date of Event	Time or Duration of Event	Rainfall (Inches)	Measurement Gauge (G) or describe	Did a Stormwater Discharge from Site Occur?		Evaluator's Initials	Comments
				Yes	No		
1		0.00	website		X	NEM	
2	6:58 a.m. - Midnight	0.03	website		X	NEM	Light rain/snow mix
3	Midnight – 6:58 a.m.	0.28	website	X		NEM	Light freezing rain (> 0.1" around 2:00 a.m.
4		0.00	website		X	NEM	
5	10:09 -Midnight	0.02	website		X	NEM	Light freezing rain
6, Sa	Midnight – Midnight	0.78	website	X		NEM	Rain and light rain
7, Su	Midnight – 12:14 a.m.	0.01	website	X		NEM	Rain (continuation of storm event)
8		0.00	website		X	NEM	
9	Midnight - Midnight	2.64	website	X		NEM	Snow - Light freezing rain – heavy rain; > 0.1" after 10:00 a.m.; **SAMPLED**
10	Midnight – 3:58 p.m.	0.23	website	X		NEM	Light drizzle – light rain
11	Midnight – 10:13 p.m.	0.05	website		?	NEM	Light drizzle; light snow @ 1:58 p.m.
12	5:29 p.m. – 10:05 p.m.	0.00	website		X	NEM	Light snow
13, Sa	5:45 a.m. – 2:58 p.m.	0.05	website		X	NEM	Light snow
14, Su		0.00	website		X	NEM	
15		0.00	website		X	NEM	
16		0.00	website		X	NEM	
17	Midnight – 10:28 a.m.	0.38	website	X		NEM	Light rain - rain
18	Midnight – 9:58 a.m.	0.01	website		X	NEM	Light rain
19		0.00	website		X	NEM	
20, Sa		0.00	website		X	NEM	
21, Su		0.00	website		X	NEM	
22	2:24 p.m. - Midnight	0.06	website		?	NEM	Light rain
23	3:13 a.m. - Midnight	0.35	website	X		NEM	Light rain - rain
24	7:13 a.m. - Midnight	0.41	website	X		NEM	Light drizzle - rain
25	Midnight – 8:58 a.m.	0.08	website	X		NEM	Light drizzle - rain
26		0.00	website		X	NEM	
27, Sa		0.00	website		X	NEM	
28, Su	5:18 a.m. – 9:58 a.m.	0.11	website	X		NEM	Rain
29		0.00	website		X	NEM	
30		0.00	website		X	NEM	
31		0.00	website		X	NEM	

Websites http://www.wunderground.com/history/airport/KPSM/2014/12/29/MonthlyHistory.html
http://www.crh.noaa.gov/data/obhistory/KPSM.html
http://weather.noaa.gov/weather/current/KPSM.html

ATTACHMENT B

Discharge Monitoring Reports

December 2014 Stormwater Sampling Results
Pease International Tradeport
Portsmouth, New Hampshire
Permit No. NH0090000

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME: PEASE DEVELOPMENT AUTHORITY
ADDRESS: 680 Peverly Rd.
PORTSTMOUTH, NH 03801
FACILITY: PEASE WASTEWATER TREATMENT FACILITY
LOCATION: 135 CORPORATE DRIVE
PORTSMOUTH, NH 03801
ATTN: DAVID ALLEN P.E. DEPUTY DIR

NH0090000	002-A
PERMIT NUMBER	**DISCHARGE NUMBER**

MONITORING PERIOD	
MM/DD/YYYY	**MM/DD/YYYY**
12/01/2014	12/31/2014

DMR Mailing ZIP CODE: 03801-2833
MAJOR

RUNOFF TO FLAGSTONE CREEK
External Outfall

No Discharge ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
BOD, 5-day, 20 deg. C	SAMPLE MEASUREMENT	******	******	******	******	******	0	mg/L	0	1/30	GR
00310 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Monthly	GRAB
pH	SAMPLE MEASUREMENT	******	******	******	6.42	******	6.43	SU	2	2/30	GR
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	6.5 MINIMUM	******	8 MAXIMUM	SU		Monthly	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	******	******	******	******	******	38	mg/L	0	1/30	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Monthly	GRAB
Oil & Grease	SAMPLE MEASUREMENT	******	******	******	******	******	0	mg/L	0	1/30	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	10 DAILY MX	mg/L		Monthly	GRAB
Arsenic, total recoverable	SAMPLE MEASUREMENT	******	******	******	******	******	0.01308	mg/L	0	1/30	GR
00978 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Monthly	GRAB
Iron, total recoverable	SAMPLE MEASUREMENT	******	******	******	******	******	2.8	mg/L	0	1/30	GR
00980 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Monthly	GRAB
Zinc, total recoverable	SAMPLE MEASUREMENT	******	******	******	******	******	0.04570	mg/L	0	1/30	GR
01094 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Monthly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.		TELEPHONE		DATE
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED ON AUGUST 8TH 2000 FOR FURTHER MONITORING REQUIREMENTS. --FOR DEICING-- PLEASEWRITE ON DMR THE CHEMICAL USED FORDEICING AND THE MONITORING DATA FOR THAT CHEMICAL AS REQUIRED ON PAGE11 OF YOUR PERMIT. ATTACH ADDITIONAL PAGE FOR COMMENT AND EXPLANATIONOF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

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FACILITY: PEASE WASTEWATER TREATMENT FACILITY
LOCATION: 135 CORPORATE DRIVE
PORTSMOUTH, NH 03801
ATTN: DAVID ALLEN P.E. DEPUTY DIR

NH0090000	002-A
PERMIT NUMBER	**DISCHARGE NUMBER**

MONITORING PERIOD	
MM/DD/YYYY	**MM/DD/YYYY**
12/01/2014	12/31/2014

DMR Mailing ZIP CODE: 03801-2833
MAJOR

RUNOFF TO FLAGSTONE CREEK
External Outfall

No Discharge ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Surfactants [MBAS]	SAMPLE MEASUREMENT	******	******	******	******	0.060	******	mg/L	0	1/30	GR
38260 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	.2 MO AVG	******	mg/L		Monthly	GRAB
Trichloroethylene	SAMPLE MEASUREMENT	******	******	******	******	******	0	mg/L	0	1/90	GR
39180 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Quarterly	GRAB
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	******	2.91	MGD	******	******	******	******	0	1/30	EST.
50050 1 0 Effluent Gross	PERMIT REQUIREMENT	******	Req. Mon. DAILY MX	MGD	******	******	******	******		Monthly	ESTIMA
Chemical oxygen demand [COD]	SAMPLE MEASUREMENT	******	******	******	******	******	200	mg/L	0	1/30	GR
80108 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Monthly	GRAB
Propylene Glycol		—	—	—	—	—	0	mg/L	0	MM/WD	GR

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TYPED OR PRINTED			AREA Code	NUMBER	MM/DD/YYYY

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ATTN: DAVID ALLEN P.E. DEPUTY DIR

NH0090000	004-A
PERMIT NUMBER	**DISCHARGE NUMBER**

MONITORING PERIOD	
MM/DD/YYYY	**MM/DD/YYYY**
12/01/2014	12/31/2014

DMR Mailing ZIP CODE: 03801-2833
MAJOR
RUNOFF TO HARVEY'S CREEK (GRAFTON)
External Outfall
No Discharge ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
BOD, 5-day, 20 deg. C	SAMPLE MEASUREMENT	******	******	******	******	******	3.3	mg/L	0	1/30	GR
00310 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Monthly	GRAB
pH	SAMPLE MEASUREMENT	******	******	******	7.35	******	7.35	SU	0	1/30	GR
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	6.5 MINIMUM	******	8 MAXIMUM	SU		Monthly	GRAB
Oil & Grease	SAMPLE MEASUREMENT	******	******	******	******	******	0	mg/L	0	1/30	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	10 DAILY MX	mg/L		Monthly	GRAB
Iron, total recoverable	SAMPLE MEASUREMENT	******	******	******	******	******	3.5	mg/L	0	1/30	GR
00980 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Monthly	GRAB
Nickel, total recoverable	SAMPLE MEASUREMENT	******	******	******	******	******	0.00286	mg/L	0	1/30	GR
01074 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Monthly	GRAB
Zinc, total recoverable	SAMPLE MEASUREMENT	******	******	******	******	******	0.08376	mg/L	0	1/30	GR
01094 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Monthly	GRAB
Lead, total recoverable	SAMPLE MEASUREMENT	******	******	******	******	******	0.00487	mg/L	0	1/30	GR
01114 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Monthly	GRAB

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TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER	MM/DD/YYYY

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

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MM/DD/YYYY	**MM/DD/YYYY**
12/01/2014	12/31/2014

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MAJOR
RUNOFF TO HARVEY'S CREEK (GRAFTON)
External Outfall
No Discharge ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Surfactants [MBAS]	SAMPLE MEASUREMENT	******	******	******	******	0.070	******	mg/L	0	1/30	GR
38260 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	.2 MO AVG	******	mg/L		Monthly	GRAB
Trichloroethylene	SAMPLE MEASUREMENT	******	******	******	******	******	0	mg/L	0	1/90	GR
39180 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Quarterly	GRAB
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	******	2.91	MGD	******	******	******	******	0	1/30	EST
50050 1 0 Effluent Gross	PERMIT REQUIREMENT	******	Req. Mon. DAILY MX	MGD	******	******	******	******		Monthly	ESTIMA
Cyanide, total recoverable	SAMPLE MEASUREMENT	******	******	******	******	******	0.056	mg/L	0	1/30	GR
78248 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Monthly	GRAB

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TYPED OR PRINTED			AREA Code	NUMBER	MM/DD/YYYY

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

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PORTSTMOUTH, NH 03801
FACILITY: PEASE WASTEWATER TREATMENT FACILITY
LOCATION: 135 CORPORATE DRIVE
PORTSMOUTH, NH 03801
ATTN: DAVID ALLEN P.E. DEPUTY DIR

NH0090000	003-A
PERMIT NUMBER	**DISCHARGE NUMBER**

MONITORING PERIOD	
MM/DD/YYYY	**MM/DD/YYYY**
12/01/2014	12/31/2014

DMR Mailing ZIP CODE: 03801-2833
MAJOR

RUNOFF TO MCINTYRE BROOK
External Outfall

No Discharge ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
BOD, 5-day, 20 deg. C	SAMPLE MEASUREMENT	******	******	******	******	******	68	mg/L	0	1/30	GR
00310 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Monthly	GRAB
pH	SAMPLE MEASUREMENT	******	******	******	7.63	******	7.63	SU	0	1/30	GR
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	6.5 MINIMUM	******	8 MAXIMUM	SU		Monthly	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	******	******	******	******	******	16	mg/L	0	1/30	GR
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Monthly	GRAB
Oil & Grease	SAMPLE MEASUREMENT	******	******	******	******	******	0	mg/L	0	1/30	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	10 DAILY MX	mg/L		Monthly	GRAB
Iron, total recoverable	SAMPLE MEASUREMENT	******	******	******	******	******	2.6	mg/L	0	1/30	GR
00980 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Monthly	GRAB
Zinc, total recoverable	SAMPLE MEASUREMENT	******	******	******	******	******	0.02963	mg/L	0	1/30	GR
01094 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Monthly	GRAB
Surfactants [MBAS]	SAMPLE MEASUREMENT	******	******	******	******	0	******	mg/L	0	1/30	GR
38260 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	.2 MO AVG	******	mg/L		Monthly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.		TELEPHONE		DATE
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COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED ON AUGUST 8TH 2000 FOR FURTHER MONITORING REQUIREMENTS. --FOR DEICING-- PLEASEWRITE THE CHEMICAL USED FOR DEICING ON THE DMR AND SUBMIT MONITORING DATA AS REQUIRED ON PAGE 11OF PERMITPLEASE ATTACH AN ADDITIONAL PAGE FOR COMMENT AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME: PEASE DEVELOPMENT AUTHORITY
ADDRESS: 680 Peverly Rd.
PORTSTMOUTH, NH 03801
FACILITY: PEASE WASTEWATER TREATMENT FACILITY
LOCATION: 135 CORPORATE DRIVE
PORTSMOUTH, NH 03801
ATTN: DAVID ALLEN P.E. DEPUTY DIR

NH0090000	003-A
PERMIT NUMBER	**DISCHARGE NUMBER**

MONITORING PERIOD	
MM/DD/YYYY	**MM/DD/YYYY**
12/01/2014	12/31/2014

DMR Mailing ZIP CODE: 03801-2833
MAJOR

RUNOFF TO MCINTYRE BROOK
External Outfall

No Discharge ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Trichloroethylene	SAMPLE MEASUREMENT	******	******	******	******	******	0	mg/l	0	1/90	GR
39180 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Quarterly	GRAB
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	******	24.12	MGD	******	******	******	******	0	1/30	EST.
50050 1 0 Effluent Gross	PERMIT REQUIREMENT	******	Req. Mon. DAILY MX	MGD	******	******	******	******		Monthly	ESTIMA
Chemical oxygen demand [COD]	SAMPLE MEASUREMENT	******	******	******	******	******	93	mg/L	0	1/30	GR
80108 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Monthly	GRAB
Propylene Glycol		—	—	—	—	—	23	mg/L	0	MM/WD	GR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.		TELEPHONE		DATE
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED ON AUGUST 8TH 2000 FOR FURTHER MONITORING REQUIREMENTS. --FOR DEICING-- PLEASEWRITE THE CHEMICAL USED FOR DEICING ON THE DMR AND SUBMIT MONITORING DATA AS REQUIRED ON PAGE 11OF PERMITPLEASE ATTACH AN ADDITIONAL PAGE FOR COMMENT AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME: PEASE DEVELOPMENT AUTHORITY
ADDRESS: 680 Peverly Rd.
PORTSTMOUTH, NH 03801
FACILITY: PEASE WASTEWATER TREATMENT FACILITY
LOCATION: 135 CORPORATE DRIVE
PORTSMOUTH, NH 03801

ATTN: DAVID ALLEN P.E. DEPUTY DIR

NH0090000	001-A
PERMIT NUMBER	**DISCHARGE NUMBER**

MONITORING PERIOD	
MM/DD/YYYY	**MM/DD/YYYY**
12/01/2014	12/31/2014

DMR Mailing ZIP CODE: 03801-2833
MAJOR

RUNNOFF TO HODGKINS BROOK (Hodgson)
External Outfall

No Discharge ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
BOD, 5-day, 20 deg. C	SAMPLE MEASUREMENT	******	******	******	******	******	4.5	mg/L	0	1/30	GR
00310 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Monthly	GRAB
pH	SAMPLE MEASUREMENT	******	******	******	7.72	******	7.72	SU	0	1/30	GR
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	6.5 MINIMUM	******	8 MAXIMUM	SU		Monthly	GRAB
Oil & Grease	SAMPLE MEASUREMENT	******	******	******	******	******	0	mg/L	0	1/30	GR
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	10 DAILY MX	mg/L		Monthly	GRAB
Iron, total recoverable	SAMPLE MEASUREMENT	******	******	******	******	******	2.0	mg/L	0	1/30	GR
00980 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Monthly	GRAB
Lead, total recoverable	SAMPLE MEASUREMENT	******	******	******	******	******	0.00725	mg/L	0	1/30	GR
01114 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Monthly	GRAB
Surfactants [MBAS]	SAMPLE MEASUREMENT	******	******	******	******	0.070	******	mg/L	0	1/30	GR
38260 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	.2 MO AVG	******	mg/L		Monthly	GRAB
Trichloroethylene	SAMPLE MEASUREMENT	******	******	******	******	******	0	mg/l	0	1/90	GR
39180 1 0 Effluent Gross	PERMIT REQUIREMENT	******	******	******	******	******	Req. Mon. DAILY MX	mg/L		Quarterly	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE
	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.				
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED ON AUGUST 8TH 2000 FOR FURTHER MONITORING REQUIREMENTS.PLEASE ATTACH AN ADDITIONAL PAGE FOR COMMENT AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

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NH0090000	001-A
PERMIT NUMBER	**DISCHARGE NUMBER**

MONITORING PERIOD	
MM/DD/YYYY	**MM/DD/YYYY**
12/01/2014	12/31/2014

DMR Mailing ZIP CODE: 03801-2833
MAJOR
RUNNOFF TO HODGKINS BROOK (Hodgson)
External Outfall
No Discharge ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	******	12.06	MGD	******	******	******	******	0	1/30	EST.
50050 1 0 Effluent Gross	PERMIT REQUIREMENT	******	Req. Mon. DAILY MX	MGD	******	******	******	******		Monthly	ESTIMA

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE
	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.				
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA Code	NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

REFER TO PERMIT ISSUED ON AUGUST 8TH 2000 FOR FURTHER MONITORING REQUIREMENTS.PLEASE ATTACH AN ADDITIONAL PAGE FOR COMMENT AND EXPLANATION OF ANY VIOLATIONS, AS NECESSARY.

ATTACHMENT C

Stormwater Sampling Field Log;
Flow Calculation Sheet; Usage of Deicing Chemicals

December 2014 Stormwater Sampling Results
Pease International Tradeport
Portsmouth, New Hampshire
Permit No. NH0090000

RANSOM
Consulting
Engineers
and Scientists

STORMWATER SAMPLING FIELD LOG

Project Name: Pease Tradeport
Project Number: 101.05023.001
Sampling/pH Analysis Date: 12-9-14

Flow (Q) Measurement (MGD) = Velocity (V) x Area (A)= Flow (ft3/sec) x 0.646
where: V = distance (ft) / time (sec); A = width (ft) x depth (ft)

Conductivity of Distilled Water : 0.00 ***Date of Test:*** 12-9-14

pH meter calibration procedure: Calibrated Hanna pH meter to 7.01+10.01 buffer Solution + Check against 9.18pH - Meter w/in specs

Outfall 002: Flagstone Creek (by runway, need key) **Flow Q=** _____ **MGD**

pH Sample Collected by: BAB Collection time: 10:55

pH= 6.43 Water Temp= 4.8 Time: 10:58 Analyst: BAB

Duplicate pH= 6.42 Water Temp= 4.4 Time: 10:59 Analyst: BAB

2nd pH Sample Collected @ 11:00 6.42pH / 4.1°C @ 11:02

Velocity: distance= 4 ft 6.42pH / 3.8°C time= ✓ sec

Area: width= 4½ ft depth= 9 inches

Grab Samples collected for laboratory analysis by: BAB/DMM @ 11:03 Time = 10:55

Outfall 004: Grafton (aka Harvey's Creek)(by road) **Flow Q=** _____ **MGD**

pH Sample Collected by: BAB Collection time: 12:35

pH= 7.35 Water Temp= 2.3 Time: 12:37 Analyst: BAB

Duplicate pH= 7.24 Water Temp= 2.3 Time: 12:38 Analyst: BAB

Flow Measurements, Flow Calculations by: DMM

Velocity: distance= 4 ft time= 4 sec

Area: width= 6 ft depth= 9 inches

Grab Samples collected for laboratory analysis by: BAB/DMM Time = 11:25

Outfall 003: McIntyre Brook (OWS) **Flow Q=** _____ **MGD**

pH Sample Collected by: BAB Collection time: 12:14

pH= 7.63 Water Temp= 1.5 Time: 12:16 Analyst: DMM

Duplicate pH= 7.65 Water Temp= 1.6 Time: 12:17 Analyst: DMM

Flow Measurements, Flow Calculations by: BAB/DMM

Velocity: distance= 4 ft time= 1 sec

Area: width= 2 ft depth= 16 inches

Grab Samples collected for laboratory analysis by: BAB/DMM Time = 11:55

Outfall 001: Hodgson Brook (by WWTP) **Flow Q=** _____ **MGD**

(a.k.a. "Hodgkins Brook")

pH Sample Collected by: BAB Collection time: 12:55

pH= 7.72 Water Temp= 1.6 Time: 12:56 Analyst: BAB

Duplicate pH= 7.69 Water Temp= 1.6 Time: 12:57 Analyst: BAB

Flow Measurements, Flow Calculations by: DMM

Velocity: distance= 4 ft time= 2 sec

Area: width= 8 ft depth= 14 inches

Grab Samples collected for laboratory analysis by: DMM/BAB Time = 12:50

* pH Readings taken after recalibration of meter in the field

RANSOM Environmental Consultants, Inc.

STORMWATER FLOW CALCULATION SHEET

Project Name: Pease Tradeport
Project Number: 101.05023.001
Sampling Date: 12/9/2014
Flow Calcs by: NEM

Flow (Q) Measurement (ft^3/sec) = Velocity (V) x Area (A)
where: V = distance (ft) / time (sec)
A = width (ft) x depth (ft)

Flow (Q) in MGD = Flow (ft^3/sec) x 0.646

Outfall 002: Flagstone Creek (runway)

Flow Measurements by: BAB

Velocity:	distance=	4	ft	time(t)=	3	sec
Area:	width (w)=	4.5	ft	depth(d)=	9	inches
	Flow Q=	4.50	**cfs**	**Flow Q=**	2.91	**MGD**

Outfall 004: Grafton (aka Harvey's Creek)

Flow Measurements by: BAB

Velocity:	distance=	4	ft	time=	4	sec
Area:	width=	6	ft	depth=	9	inches
	Flow Q=	4.50	**cfs**	**Flow Q=**	2.91	**MGD**

Outfall 003: McIntyre Brook (OWS)

Flow Measurements by: BAB

Velocity:	distance=	4	ft	time=	1	sec
Area:	width=	7	ft	depth=	16	inches
	Flow Q=	37.33	**cfs**	**Flow Q=**	24.12	**MGD**

Outfall 001: Hodgkins Brook (by WWTP)

Flow Measurements by: BAB

Velocity:	distance=	4	ft	time=	2	sec
Area:	width=	8	ft	depth=	14	inches
	Flow Q=	18.67	**cfs**	**Flow Q=**	12.06	**MGD**

Usage of Deicing Chemicals
Winter 2014-2015
Pease International Tradeport
Portsmouth, New Hampshire

Month/Yr	Day	Time	Location	Propylene Glycol	Quantity (gal)	Company
Nov 2014	1	10:14 - 21:58	Discharge Event (0.22")			
	2	5:12 - 14:58	Discharge Event (0.19")			
	6	10:58 - 21:58	Discharge Event (0.27")			
	14	00:00 - 7:13	Storm Event, rain/snow mix, then snow (0.13")			
	14	7:00	NHANG Apron	Type I	104	NH ANG
	17	2:58 - 10:28	Discharge Event (0.85")			
	24	19:58-23:58	Discharge Event: Light rain-rain (0.40"); **SAMPLED**			
	26	9:58 - 24:00	Discharge Event (0.77")			
Dec 2014	3	0:00	Discharge Event (0.31+")			
	3	9:30	NHANG Apron	Type I	1,400	NH ANG
	3	9:39	Terminal Apron	Type I	87	Port City
	6	00 - 24:00	Discharge Event (0.79")			
	9-10	00 - 24:00	Discharge Event (2.87") **SAMPLED**			
	11	18:00	NHANG Apron	Type I	200	NH ANG
	11	21:30	NHANG Apron	Type I	500	NH ANG
	13	6:58	General Aviation	Type I	4.7	Port City
	17	00 - 10:28	Discharge Event (0.38")			
	23-25	00 - 8:58	Discharge Event (0.84")			
	28	05:18 - 9:58	Discharge Event (0.11")			

ATTACHMENT D

Laboratory Chemical Analysis Reports

December 2014 Stormwater Sampling Results
Pease International Tradeport
Portsmouth, New Hampshire
Permit No. NH0090000

ANALYTICAL REPORT

Lab Number:	L1429561
Client:	Ransom Consulting, Inc. 112 Corporate Drive Pease International Tradeport Portsmouth, NH 03801
ATTN:	Nancy Marshall
Phone:	(603) 436-1490
Project Name:	PDA NPDES
Project Number:	101.05023.001
Report Date:	12/16/14

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: PDA NPDES
Project Number: 101.05023.001

Lab Number: L1429561
Report Date: 12/16/14

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1429561-01	FLAGSTONE CREEK	WATER	PEASE INTERNATIONAL TRADE PORT	12/09/14 10:55	12/09/14
L1429561-02	GRAFTON	WATER	PEASE INTERNATIONAL TRADE PORT	12/09/14 11:25	12/09/14
L1429561-03	MCINTYRE BROOK	WATER	PEASE INTERNATIONAL TRADE PORT	12/09/14 11:55	12/09/14
L1429561-04	HODGSON BROOK	WATER	PEASE INTERNATIONAL TRADE PORT	12/09/14 12:50	12/09/14

Project Name: PDA NPDES
Project Number: 101.05023.001

Lab Number: L1429561
Report Date: 12/16/14

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Bryan Vangel

Title: Technical Director/Representative Date: 12/16/14

METALS

Project Name: PDA NPDES
Lab Number: L1429561
Project Number: 101.05023.001
Report Date: 12/16/14

SAMPLE RESULTS

Lab ID: L1429561-01
Client ID: FLAGSTONE CREEK
Sample Location: PEASE INTERNATIONAL TRADE PORT
Matrix: Water
Date Collected: 12/09/14 10:55
Date Received: 12/09/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	0.01308		mg/l	0.00050	--	1	12/11/14 11:07	12/12/14 12:56	EPA 3005A	1,6020A	KL
Iron, Total	2.8		mg/l	0.05	--	1	12/11/14 11:07	12/12/14 12:24	EPA 3005A	19,200.7	TT
Zinc, Total	0.04570		mg/l	0.01000	--	1	12/11/14 11:07	12/12/14 12:56	EPA 3005A	1,6020A	KL

Project Name: PDA NPDES
Lab Number: L1429561
Project Number: 101.05023.001
Report Date: 12/16/14

SAMPLE RESULTS

Lab ID: L1429561-02
Client ID: GRAFTON
Sample Location: PEASE INTERNATIONAL TRADE PORT
Matrix: Water
Date Collected: 12/09/14 11:25
Date Received: 12/09/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Iron, Total	3.5		mg/l	0.05	--	1	12/11/14 11:07	12/12/14 12:43	EPA 3005A	19,200.7	TT
Lead, Total	0.00487		mg/l	0.00050	--	1	12/11/14 11:07	12/12/14 13:45	EPA 3005A	1,6020A	KL
Nickel, Total	0.00286		mg/l	0.00050	--	1	12/11/14 11:07	12/12/14 13:45	EPA 3005A	1,6020A	KL
Zinc, Total	0.08376		mg/l	0.01000	--	1	12/11/14 11:07	12/12/14 13:45	EPA 3005A	1,6020A	KL

Project Name: PDA NPDES
Lab Number: L1429561
Project Number: 101.05023.001
Report Date: 12/16/14

SAMPLE RESULTS

Lab ID: L1429561-03
Client ID: MCINTYRE BROOK
Sample Location: PEASE INTERNATIONAL TRADE PORT
Matrix: Water
Date Collected: 12/09/14 11:55
Date Received: 12/09/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Iron, Total	2.6		mg/l	0.05	--	1	12/11/14 11:07	12/12/14 12:47	EPA 3005A	19,200.7	TT
Zinc, Total	0.02963		mg/l	0.01000	--	1	12/11/14 11:07	12/12/14 13:49	EPA 3005A	1,6020A	KL

Project Name: PDA NPDES
Lab Number: L1429561
Project Number: 101.05023.001
Report Date: 12/16/14

SAMPLE RESULTS

Lab ID: L1429561-04
Client ID: HODGSON BROOK
Sample Location: PEASE INTERNATIONAL TRADE PORT
Matrix: Water
Date Collected: 12/09/14 12:50
Date Received: 12/09/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Iron, Total	2.0		mg/l	0.05	--	1	12/11/14 11:07	12/12/14 13:10	EPA 3005A	19,200.7	TT
Lead, Total	0.00725		mg/l	0.00050	--	1	12/11/14 11:07	12/12/14 13:53	EPA 3005A	1,6020A	KL

Project Name: PDA NPDES
Project Number: 101.05023.001
Lab Number: L1429561
Report Date: 12/16/14

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-04 Batch: WG747675-1										
Arsenic, Total	ND		mg/l	0.00050	--	1	12/11/14 11:07	12/12/14 12:31	1,6020A	KL
Lead, Total	ND		mg/l	0.00050	--	1	12/11/14 11:07	12/12/14 12:31	1,6020A	KL
Nickel, Total	ND		mg/l	0.00050	--	1	12/11/14 11:07	12/12/14 12:31	1,6020A	KL
Zinc, Total	ND		mg/l	0.01000	--	1	12/11/14 11:07	12/12/14 12:31	1,6020A	KL

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-04 Batch: WG747677-1										
Iron, Total	ND		mg/l	0.05	--	1	12/11/14 11:07	12/13/14 11:01	19,200.7	BC

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: PDA NPDES

Project Number: 101.05023.001

Lab Number: L1429561

Report Date: 12/16/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-04 Batch: WG747675-2								
Arsenic, Total	100		-		80-120	-		
Lead, Total	106		-		80-120	-		
Nickel, Total	103		-		80-120	-		
Zinc, Total	112		-		80-120	-		
Total Metals - Westborough Lab Associated sample(s): 01-04 Batch: WG747677-2								
Iron, Total	100		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: PDA NPDES
Project Number: 101.05023.001

Lab Number: L1429561
Report Date: 12/16/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG747675-4 QC Sample: L1429561-01 Client ID: FLAGSTONE CREEK												
Arsenic, Total	0.01308	0.12	0.1334	100		-	-		75-125	-		20
Lead, Total	0.0058	0.51	0.5397	105		-	-		75-125	-		20
Nickel, Total	0.0020	0.5	0.5002	100		-	-		75-125	-		20
Zinc, Total	0.04570	0.5	0.5519	101		-	-		75-125	-		20
Total Metals - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG747677-4 QC Sample: L1429561-01 Client ID: FLAGSTONE CREEK												
Iron, Total	2.8	1	3.8	100		-	-		75-125	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: PDA NPDES
Project Number: 101.05023.001

Lab Number: L1429561
Report Date: 12/16/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG747675-3 QC Sample: L1429561-01 Client ID: FLAGSTONE CREEK						
Arsenic, Total	0.01308	0.01233	mg/l	6		20
Zinc, Total	0.04570	0.04348	mg/l	5		20
Total Metals - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG747677-3 QC Sample: L1429561-01 Client ID: FLAGSTONE CREEK						
Iron, Total	2.8	2.8	mg/l	0		20

INORGANICS
&
MISCELLANEOUS

Project Name: PDA NPDES
Project Number: 101.05023.001
Lab Number: L1429561
Report Date: 12/16/14

SAMPLE RESULTS

Lab ID: L1429561-01
Client ID: FLAGSTONE CREEK
Sample Location: PEASE INTERNATIONAL TRADE PORT
Matrix: Water
Date Collected: 12/09/14 10:55
Date Received: 12/09/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	38.		mg/l	5.0	NA	1	-	12/10/14 11:55	30,2540D	DW
Chemical Oxygen Demand	200		mg/l	20	--	1	12/11/14 17:00	12/11/14 19:42	44,410.4	TL
BOD, 5 day	ND		mg/l	2.0	NA	1	12/10/14 23:00	12/15/14 17:22	30,5210B	SE
Oil & Grease, Hem-Grav	ND		mg/l	4.0	--	1	12/10/14 12:30	12/10/14 15:00	74,1664A	ML
Surfactants, MBAS	0.060		mg/l	0.050	--	1	12/09/14 23:30	12/10/14 01:24	30,5540C	MR

Project Name: PDA NPDES
Project Number: 101.05023.001
Lab Number: L1429561
Report Date: 12/16/14

SAMPLE RESULTS

Lab ID: L1429561-02
Client ID: GRAFTON
Sample Location: PEASE INTERNATIONAL TRADE PORT
Matrix: Water

Date Collected: 12/09/14 11:25
Date Received: 12/09/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.056		mg/l	0.005	--	1	12/11/14 16:27	12/12/14 17:35	30,4500CN-CE	JO
BOD, 5 day	3.3		mg/l	2.0	NA	1	12/10/14 23:00	12/15/14 17:22	30,5210B	SE
Oil & Grease, Hem-Grav	ND		mg/l	4.0	--	1	12/10/14 12:30	12/10/14 15:00	74,1664A	ML
Surfactants, MBAS	0.070		mg/l	0.050	--	1	12/09/14 23:30	12/10/14 01:24	30,5540C	MR

Project Name: PDA NPDES
Project Number: 101.05023.001
Lab Number: L1429561
Report Date: 12/16/14

SAMPLE RESULTS

Lab ID: L1429561-03
Client ID: MCINTYRE BROOK
Sample Location: PEASE INTERNATIONAL TRADE PORT
Matrix: Water
Date Collected: 12/09/14 11:55
Date Received: 12/09/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	16.		mg/l	5.0	NA	1	-	12/10/14 11:55	30,2540D	DW
Chemical Oxygen Demand	93.		mg/l	20	--	1	12/11/14 17:00	12/11/14 19:42	44,410.4	TL
BOD, 5 day	68.		mg/l	15	NA	7.5	12/10/14 23:00	12/15/14 17:22	30,5210B	SE
Oil & Grease, Hem-Grav	ND		mg/l	4.0	--	1	12/10/14 12:30	12/10/14 15:00	74,1664A	ML
Surfactants, MBAS	ND		mg/l	0.050	--	1	12/09/14 23:30	12/10/14 01:25	30,5540C	MR

Project Name: PDA NPDES
Project Number: 101.05023.001

Lab Number: L1429561
Report Date: 12/16/14

SAMPLE RESULTS

Lab ID: L1429561-04
Client ID: HODGSON BROOK
Sample Location: PEASE INTERNATIONAL TRADE PORT
Matrix: Water

Date Collected: 12/09/14 12:50
Date Received: 12/09/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
BOD, 5 day	4.5		mg/l	2.0	NA	1	12/10/14 23:00	12/15/14 17:22	30,5210B	SE
Oil & Grease, Hem-Grav	ND		mg/l	4.0	--	1	12/10/14 12:30	12/10/14 15:00	74,1664A	ML
Surfactants, MBAS	0.070		mg/l	0.050	--	1	12/09/14 23:30	12/10/14 01:25	30,5540C	MR

Project Name: PDA NPDES
Project Number: 101.05023.001
Lab Number: L1429561
Report Date: 12/16/14

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG747114-1										
Surfactants, MBAS	ND		mg/l	0.050	--	1	12/09/14 23:30	12/10/14 01:22	30,5540C	MR
General Chemistry - Westborough Lab for sample(s): 01,03 Batch: WG747160-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	12/10/14 11:55	30,2540D	DW
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG747277-1										
Oil & Grease, Hem-Grav	ND		mg/l	4.0	--	1	12/10/14 12:30	12/10/14 15:00	74,1664A	ML
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG747458-1										
BOD, 5 day	ND		mg/l	2.0	NA	1	12/10/14 23:00	12/15/14 17:22	30,5210B	SE
General Chemistry - Westborough Lab for sample(s): 02 Batch: WG747783-1										
Cyanide, Total	ND		mg/l	0.005	--	1	12/11/14 16:27	12/12/14 17:33	30,4500CN-CE	JO
General Chemistry - Westborough Lab for sample(s): 01,03 Batch: WG747823-1										
Chemical Oxygen Demand	ND		mg/l	20	--	1	12/11/14 17:00	12/11/14 19:41	44,410.4	TL

Lab Control Sample Analysis

Batch Quality Control

Project Name: PDA NPDES

Project Number: 101.05023.001

Lab Number: L1429561

Report Date: 12/16/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG747114-2								
Surfactants, MBAS	98		-		65-126	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG747277-2								
Oil & Grease, Hem-Grav	92		-		78-114	-		18
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG747458-2								
BOD, 5 day	103		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 02 Batch: WG747783-2								
Cyanide, Total	104		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01,03 Batch: WG747823-2								
Chemical Oxygen Demand	100		-		95-105	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: PDA NPDES
Project Number: 101.05023.001

Lab Number: L1429561
Report Date: 12/16/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG747114-4 QC Sample: L1429561-03 Client ID: MCINTYRE BROOK												
Surfactants, MBAS	ND	0.4	0.360	90		-	-		52-157	-		32
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG747277-4 QC Sample: L1429558-13 Client ID: MS Sample												
Oil & Grease, Hem-Grav	ND	40.8	38	94		-	-		78-114	-		18
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG747458-4 QC Sample: L1429578-01 Client ID: MS Sample												
BOD, 5 day	ND	100	130	131		-	-		50-145	-		35
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG747783-3 QC Sample: L1429561-02 Client ID: GRAFTON												
Cyanide, Total	0.056	0.2	0.275	109		-	-		90-110	-		30
General Chemistry - Westborough Lab Associated sample(s): 01,03 QC Batch ID: WG747823-3 QC Sample: L1429610-07 Client ID: MS Sample												
Chemical Oxygen Demand	26	238	260	97		-	-		80-120	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: PDA NPDES
Project Number: 101.05023.001

Lab Number: L1429561
Report Date: 12/16/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG747114-3 QC Sample: L1429493-02 Client ID: DUP Sample						
Surfactants, MBAS	0.110	0.110	mg/l	0		32
General Chemistry - Westborough Lab Associated sample(s): 01,03 QC Batch ID: WG747160-2 QC Sample: L1429549-01 Client ID: DUP Sample						
Solids, Total Suspended	25	20	mg/l	22		29
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG747277-3 QC Sample: L1429558-10 Client ID: DUP Sample						
Oil & Grease, Hem-Grav	ND	ND	mg/l	NC		18
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG747458-3 QC Sample: L1429578-01 Client ID: DUP Sample						
BOD, 5 day	ND	ND	mg/l	NC		35
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG747783-4 QC Sample: L1429611-01 Client ID: DUP Sample						
Cyanide, Total	ND	ND	mg/l	NC		30
General Chemistry - Westborough Lab Associated sample(s): 01,03 QC Batch ID: WG747823-4 QC Sample: L1429610-07 Client ID: DUP Sample						
Chemical Oxygen Demand	26	26	mg/l	0		20

Project Name: PDA NPDES
Project Number: 101.05023.001

Lab Number: L1429561
Report Date: 12/16/14

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler	
A	Absent
D	Absent
B	Absent
C	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1429561-01A	Plastic 250ml HNO3 preserved	C	<2	2.4	Y	Absent	ZN-6020T(180),FE-UI(180),AS-6020T(180)
L1429561-01B	Plastic 250ml H2SO4 preserved	C	<2	2.4	Y	Absent	COD-410(28)
L1429561-01C	Plastic 500ml unpreserved	C	7	2.4	Y	Absent	BOD-5210(2)
L1429561-01D	Plastic 950ml unpreserved	C	7	2.4	Y	Absent	MBAS-5540(2)
L1429561-01E	Plastic 950ml unpreserved	C	7	2.4	Y	Absent	TSS-2540(7)
L1429561-01F	Amber 1000ml HCl preserved	C	N/A	2.4	Y	Absent	OG-1664(28)
L1429561-01G	Amber 1000ml HCl preserved	C	N/A	2.4	Y	Absent	OG-1664(28)
L1429561-02A	Plastic 250ml HNO3 preserved	B	<2	3.1	Y	Absent	NI-6020T(180),ZN-6020T(180),FE-UI(180),PB-6020T(180)
L1429561-02B	Plastic 250ml NaOH preserved	B	>12	3.1	Y	Absent	TCN-4500(14)
L1429561-02C	Plastic 500ml unpreserved	B	7	3.1	Y	Absent	BOD-5210(2)
L1429561-02D	Plastic 950ml unpreserved	B	7	3.1	Y	Absent	MBAS-5540(2)
L1429561-02E	Amber 1000ml HCl preserved	B	N/A	3.1	Y	Absent	OG-1664(28)
L1429561-02F	Amber 1000ml HCl preserved	B	N/A	3.1	Y	Absent	OG-1664(28)
L1429561-03A	Plastic 250ml HNO3 preserved	A	<2	2.3	Y	Absent	ZN-6020T(180),FE-UI(180)
L1429561-03B	Plastic 250ml H2SO4 preserved	A	<2	2.3	Y	Absent	COD-410(28)
L1429561-03C	Plastic 500ml unpreserved	A	7	2.3	Y	Absent	BOD-5210(2)
L1429561-03D	Plastic 950ml unpreserved	A	7	2.3	Y	Absent	MBAS-5540(2)
L1429561-03E	Plastic 950ml unpreserved	A	7	2.3	Y	Absent	TSS-2540(7)
L1429561-03F	Amber 1000ml HCl preserved	A	N/A	2.3	Y	Absent	OG-1664(28)
L1429561-03G	Amber 1000ml HCl preserved	A	N/A	2.3	Y	Absent	OG-1664(28)
L1429561-04A	Plastic 250ml HNO3 preserved	D	<2	3.3	Y	Absent	FE-UI(180),PB-6020T(180)
L1429561-04B	Plastic 500ml unpreserved	D	7	3.3	Y	Absent	BOD-5210(2)

*Values in parentheses indicate holding time in days

Project Name: PDA NPDES
Project Number: 101.05023.001

Lab Number: L1429561
Report Date: 12/16/14

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1429561-04C	Plastic 950ml unpreserved	D	7	3.3	Y	Absent	MBAS-5540(2)
L1429561-04D	Amber 1000ml HCl preserved	D	N/A	3.3	Y	Absent	OG-1664(28)
L1429561-04E	Amber 1000ml HCl preserved	D	N/A	3.3	Y	Absent	OG-1664(28)

*Values in parentheses indicate holding time in days

Project Name:	PDA NPDES	**Lab Number:**	L1429561
Project Number:	101.05023.001	**Report Date:**	12/16/14

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

Report Format: Data Usability Report

Project Name:	PDA NPDES	**Lab Number:**	L1429561
Project Number:	101.05023.001	**Report Date:**	12/16/14

Data Qualifiers

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

Project Name:	PDA NPDES	**Lab Number:**	L1429561
Project Number:	101.05023.001	**Report Date:**	12/16/14

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

74 Method 1664,Revision A: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-98-002, February 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

Last revised December 16, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility
EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.
EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.
EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 625: 4-Chloroaniline, 4-Methylphenol.
SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.
EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility
EPA 8270D: Biphenyl.
EPA 2540D: TSS
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL — World Class Chemistry

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 12/9/14

ALPHA Job #: L1429561

Client Information

Client: Ransom Consulting, Inc.

Address: 112Corporate Drive

Portsmouth, NH 03801

Phone: 603-436-1490

Fax: 603-436-6037

Email: nmarshall@ransomenv.com

☒ These samples have been Previously analyzed by Alpha

Project Information

Project Name: PDA NPDES

Project Location: Pease International Tradeport

Project #: 101.05023.001

Project Manager: Nancy Marshall

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: 12/16/14 Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info

PO #: [redacted] 7368

Regulatory Requirements/Report Limits

State/Fed Program	Criteria

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS

SAMPLE HANDLING

Filtration
☐ Done
☒ Not Needed
☐ Lab to do

Preservation
☐ Lab to do

(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	BOD	Oil and Grease	Surfactants	TSS	COD	Total Arsenic	Total Fe	Total Zn	Total Cyanide	Total Ni	Total Pb		Sample Specific Comments	TOTAL # BOTTLES
29561/1	Flagstone Creek	12-9-14	10:55	RO	BAB	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐	☐		7
2	Grafton	12-9-14	11:25	RO	BAB	☒	☒	☒	☐	☐	☐	☒	☒	☒	☒	☒	☐		6
3	McIntire Brook	12-9-14	11:55	RO	BAB	☒	☒	☒	☒	☒	☐	☒	☒	☐	☐	☐	☐		7
4	Hodgson Brook	12-9-14	12:50	RO	BAB	☒	☒	☒	☐	☐	☐	☒	☐	☐	☐	☒	☐		5
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
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						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
Container Type						P	A	P	P	P	P	P	P	P	P	P	-		
Preservative						A	B	A	A	D	C	C	C	C	C	C	-		

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	12/9/14 16:05	Jessica J. Wagner AAL	12/9/14 1607
Jessica J. Wagner	12/9/14 1700	[signature] AAL	12-9-14 19:45
[signature] AAL	12-9-14 2[illegible]:50	[signature]	12/9/14 2130

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO: 01-01(I-NJ)
(rev. 5-JAN-12)

Eastern Analytical, Inc.

professional laboratory & drilling services

Nancy Marshall
Ransom Consulting, Inc. (MA)
12 Kent Way, Suite 100
Byfield , MA 01922-1221

ACCREDITED IN ACCORDANCE WITH nelac

Subject: Laboratory Report

Eastern Analytical, Inc. ID: 138919
Client Identification: Pease International Tradeport | 101.05023.001
Date Received: 12/10/2014

Dear Ms. Marshall :

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

Solid samples are reported on a dry weight basis, unless otherwise noted
< : "less than" followed by the reporting limit
> : "greater than" followed by the reporting limit
%R : % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw, Lab Director | 12.18.14 Date | 4 # of pages (excluding cover letter)

SAMPLE CONDITIONS PAGE

EAI ID#: **138919**

Client: **Ransom Consulting, Inc. (MA)**

Client Designation: **Pease International Tradeport | 101.05023.001**

Temperature upon receipt (°C): 3 **Received on ice or cold packs (Yes/No): Y**

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Received	Date Sampled	Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
138919.01	Flagstone Creek	12/10/14	12/8/14	aqueous		Adheres to Sample Acceptance Policy
138919.02	McIntyre Brook	12/10/14	12/9/14	aqueous		Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitibility, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.
Immediate analyses, pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite, performed at the laboratory were run outside of the recommended 15 minute hold time.
All results contained in this report relate only to the above listed samples.
References include:

1) EPA 600/4-79-020, 1983
2) Standard Methods for Examination of Water and Wastewater,20th Edition, 1998 and 22nd Edition, 2012
3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
4) Hach Water Analysis Handbook, 2nd edition, 1992

LABORATORY REPORT

EAI ID#: **138919**

Client: **Ransom Consulting, Inc. (MA)**

Client Designation: **Pease International Tradeport | 101.05023.001**

Sample ID:	Flagstone Creek	McIntyre Brook
Lab Sample ID:	138919.01	138919.02
Matrix:	aqueous	aqueous
Date Sampled:	12/8/14	12/9/14
Date Received:	12/10/14	12/10/14
Units:	mg/L	mg/L
Date of Analysis:	12/12/14	12/12/14
Analyst:	BAM	BAM
Method:	8015Cmod	8015Cmod
Dilution Factor:	1	1
Propylene Glycol	< 1	**23**
2,2,2-Trichloroethanol(surr)	**95 %R**	**96 %R**

QC REPORT

EAI ID#: **138919**

Client: **Ransom Consulting, Inc. (MA)**

Client Designation: **Pease International Tradeport | 101.05023.001**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Propylene Glycol	< 1	17 (84 %R)	20 (101 %R) (18 RPD)	12/12/2014	mg/L	70 - 130	20	8015Cmo
2,2,2-Trichloroethanol(surr)	99 %R	103 %R	103 %R	12/12/2014	% Rec	70 - 130		8015Cmo

Samples were extracted and analyzed within holding time limits.
Instrumentation was calibrated in accordance with the method requirements.
The method blanks were free of contamination at the reporting limits.
Sample surrogate recoveries met the above stated criteria.
The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.
There were no exceptions in the analyses, unless noted.
*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.

Page 1 of 1

PRINT

CHAIN-OF-CUSTODY RECORD

RESET

138919

BOLD FIELDS REQUIRED. PLEASE CIRCLE REQUESTED ANALYSIS.

SAMPLE I.D.	SAMPLING DATE/TIME *IF COMPOSITE, INDICATE BOTH START & FINISH DATE/TIME	MATRIX (SEE BELOW)	GRAB/*COMPOSITE	VOC: 524.2 MTBE; 524.2 BTEX; VTICs; 8260B 624; 1,4 DIOXANE; 8021B BTEX HALOS; 8015B GRO MAVPH	SVOC: 8270D 625 SVTICs EDB DBCP ABN A BN PAH; TPH 8100 L1 L2; 8015B DRO MAEPH; PEST 608 PCB 608; PEST 8081A PCB 8082; OIL & GREASE 1664 TPH 1664	TCLP: TCLP 1311 ABN METALS VOC PEST HERB	METALS: DISSOLVED METALS (LIST BELOW); TOTAL METALS (LIST BELOW)	INORGANICS: TS TSS TDS SPEC. CON.; Br Cl F SO_4 NO_3 NO_3/NO_2; BOD CBOD T. ALK.; TKN NH_3 T. PHOS. O. PHOS.; pH T. RES. CHLORINE; COD PHENOLS TOC DOC; TOTAL CYANIDE TOTAL SULFIDE; REACTIVE CYANIDE REACTIVE SULFIDE FLASHPOINT IGNITABILITY	MICRO: TOTAL COLIFORM E. COLI FECAL COLIFORM; ENTEROCOCCI HETEROTROPHIC PLATE COUNT	OTHER: Propylene Glycol	# OF CONTAINERS	NOTES MEOH VIAL #
Flagstone Creek	12-08-14/10:55	RO	G								X	2	
McIntyre Brook	12-09-14/11:55	RO	G								X	2	

MATRIX: A-AIR; S-SOIL; GW-GROUND WATER; SW-SURFACE WATER; DW-DRINKING WATER; WW-WASTE WATER

PRESERVATIVE: H-HCL; N-HNO_3; S-H_2SO_4; Na-NaOH; M-MEOH

PROJECT MANAGER: Nancy Marshall
COMPANY: Ransom Consulting, Inc.
ADDRESS: 112 Corporate Drive
CITY: Portsmouth **STATE:** NH **ZIP:** 03801
PHONE: 603-436-1490 **EXT.:**
FAX: 603-436-6037
E-MAIL: nmarshall@ransomenv.com
SITE NAME: Pease International Tradeport
PROJECT #: 101.05023.001
STATE: NH MA ME VT **OTHER:**
REGULATORY PROGRAM: NPDES: RGP POTW STORMWATER GWP OIL FUND BROWNFIELD OTHER:
QUOTE #: **PO #:** 7413

DATE NEEDED: Standard TAT

QA/QC REPORTING LEVEL
A B C
OR
PRESUMPTIVE CERTAINTY

REPORTING OPTIONS
PRELIMS: YES OR NO
IF YES: FAX OR PDF

ELECTRONIC OPTIONS
NO FAX E-MAIL PDF EQUIS

TEMP: 3 °C
ICE? YES No

SAMPLER(S): Bonnie A. Best

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
	12/10/14	10:52	Client 12/10/14 10:37
Client	12/10/14	13:08	
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:

METALS: 8 RCRA 13 PP FE, MN PB, CU

OTHER METALS:

SAMPLES FIELD FILTERED? ☐ YES ☑ NO

NOTES: (IE: SPECIAL DETECTION LIMITS, BILLING INFO, IF DIFFERENT)

SITE HISTORY:
SUSPECTED CONTAMINATION:
FIELD READINGS:

Eastern Analytical, Inc.
Professional laboratory & drilling services
25 CHENELL DRIVE | CONCORD, NH 03301 | TEL: 603.228.0525 | 1.800.287.0525 | FAX: 603.228.4591 | E-MAIL: CUSTOMERSERVICE@EAILABS.COM | WWW.EAILABS.COM

(WHITE: ORIGINAL GREEN: PROJECT MANAGER)